Application No.: 10/647,254

Attorney Docket No.: Q76509

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

(currently amended): An MPEG video decoding method, comprising: 1.

determining whether to perform motion compensation on motion-vector-decoded data or

not depending on a value of a decoded motion vector;

determining whether to perform inverse discrete cosine transformation (IDCT) on

motion-compensated data or not depending on a plurality of values of decoded DCT coefficients;

and

generating a decoded image based on the results of the two determination

stepsdetermining whether to perform the motion compensation and the determining whether to

perform the IDCT.

2. (currently amended): The MPEG video decoding method of claim 1, wherein the

determining whether to perform motion compensation or not comprises:

determining whether or not the value of the decoded motion vector is 0; and

determining not to perform the motion compensation if the value of the decoded motion

vector is 0 and determining to perform the motion compensation if the value of the decoded

motion vector is not 0.

Application No.: 10/647,254

Attorney Docket No.: Q76509

3. (currently amended): The MPEG video decoding method of claim 1, wherein the

determining whether to perform the inverse DCT or not comprises:

determining whether or not the value each of the plurality of the values of each the

decoded DCT coefficient coefficients is 0; and

determining not to perform the inverse DCT if the value each of the plurality of the

values of each the decoded DCT coefficient coefficients is 0 and determining to perform the

inverse DCT if the value any of the plurality of the values of any the decoded DCT coefficient

coefficients is not 0.

4. (canceled).

5. (withdrawn): An MPEG video decoding method, comprising:

generating a predicted image macroblock depending on a value of a decoded motion

vector;

writing the predicted image macroblock in a macroblock buffer;

generating a differential image macroblock depending on a plurality of values of decoded

DCT coefficients;

generating a decoded image macroblock by adding the differential image macroblock to

the predicted image macroblock written in the macroblock buffer; and

writing the decoded image macroblock in a frame buffer.

Application No.: 10/647,254

Attorney Docket No.: Q76509

6. (withdrawn): The MPEG video decoding method of claim 5, wherein generating

the predicted image macroblock comprises:

determining whether or not the decoded motion vector is 0;

determining a previous image macroblock as the predicted image macroblock if the

decoded motion vector is 0; and

generating the predicted image macroblock by performing motion compensation on the

previous image macroblock if the decoded motion vector is not 0.

7. (withdrawn): The MPEG video decoding method of claim 5, wherein generating

the differential image macroblock comprises:

determining whether or not the value of each decoded DCT coefficient is 0;

determining not to generate the differential image macroblock if the value of each

decoded DCT coefficient is 0; and

generating the differential image macroblock by performing inverse DCT if the value of

any decoded DCT coefficient is not 0,

wherein if the differential image macroblock is not generated, adding the differential

image to the predicted image is skipped.

8. (original): An MPEG video decoder, comprising:

Application No.: 10/647,254

Attorney Docket No.: Q76509

a motion vector determiner determining whether to perform motion compensation or not

depending on a value of a decoded motion vector; and

a DCT coefficient determiner determining whether to perform inverse discrete cosine

transform (IDCT) or not depending on a plurality of values of decoded DCT coefficients,

wherein an MPEG video stream is decoded based on determinations of the motion vector

determiner and the DCT coefficient determiner.

9. (currently amended): The MPEG video decoder of claim 8, wherein the motion

vector determiner determines not to perform the motion compensation if the value of the decoded

motion vector is 0, and determines to perform the motion compensation if the value of the

decoded motion vector is not 0.

10. (currently amended): The MPEG video decoder of claim 8, wherein the DCT

coefficient determiner determines not to perform the inverse DCT if the value each of the

plurality of the values of each the decoded DCT coefficient coefficients is 0, and determines to

perform the inverse DCT if the value any of the plurality of the values of any the decoded DCT

coefficient-is not 0.

11. (canceled).

12. (withdrawn): An MPEG video decoder, comprising:

Application No.: 10/647,254

Attorney Docket No.: Q76509

a predicted image calculation unit generating a predicted image macroblock depending

on a value of a decoded motion vector;

a differential image calculation unit generating a differential image macroblock

depending on a plurality of values of decoded DCT coefficients;

a macroblock buffer where the predicted image macroblock and the differential image

macroblock are added; and

a frame buffer where a decoded image macroblock is written, after the decoded image

macroblock is generated by adding the predicted image macroblock and the differential image

macroblock in the macroblock buffer.

13. The MPEG video decoder of claim 12, wherein the predicted (withdrawn):

image calculation unit comprises:

a motion vector determiner determining whether or not the decoded motion vector is 0;

and

a motion compensator performing motion compensation depending on a result of the

determination.

(withdrawn): The MPEG video decoder of claim 12, wherein the differential 14.

image calculation unit comprises:

a DCT coefficient determiner determining whether or not the value of each decoded DCT

coefficient is 0; and

Application No.: 10/647,254

Attorney Docket No.: Q76509

an inverse discrete cosine transformer performing inverse DCT depending on a the result

of the determination.

15. (new): A video decoding method, comprising:

determining whether to perform motion compensation on motion-vector-decoded data or

not depending on a value of a decoded motion vector; and

generating a decoded image based on a result of the determining whether to perform the

motion compensation.

16. (new): A video decoder, comprising:

a motion vector determiner determining whether to perform motion compensation or not

depending on a value of a decoded motion vector;

wherein an MPEG video stream is decoded based on a determination of the motion vector

determiner.